

Abstract of the Disclosure

This invention relates to a method for controlling the production of cellular (3R)-hydroxyacyl CoA esters of predetermined length in a chosen host cell or organism. In particular, the invention relates to a modified gene encoding a multifunctional 2-enoyl-CoA hydratase 2/(3R)-hydroxyacyl CoA dehydrogenase enzyme type 2 protein and DNA constructs and host comprising the gene. The modification of the gene results in the enrichment of cellular (3R)-hydroxyacyl CoA esters of predetermined length, when the gene is introduced and expressed in a host cell oxidizing exogenous or endogenous β -fatty acids.

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